

BOOK REVIEWS, NOTES AND COMMENTS

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LA MENTE DEL CORVO

Bernd Heinrich

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€ 35,00.

[*Mind of the raven*]

“Everything you always wanted to know about the raven, and never dared to ask”. This could be an appropriate title for this effort by Bernd Heinrich, who is rightly so considered a passionate and extremely knowledgeable expert of raven's biology and behavior. We remember his title from 1989 (*Ravens in winter*), mainly focused on feeding habits of these wonderful birds, and their propensity (or not) to share their food with conspecifics. This time the approach is wider, and Heinrich explores many dimensions of ravens' ecology and ethology, and the tale is full of surprises and fascinating findings. For example, I particularly enjoyed the parts dedicated to pair bonding and the feeding of chicks, as well as the pages which describe the ravens hiding foods, which lead to interesting hypothesis about cognitive abilities of this species. The parallel with the formidable abilities of scrub jays in remembering where the food has been hidden, comes obviously to mind.

The author's approach when studying his subjects is pretty physical: it includes climbing high trees in the early hours of morning, or carrying heavy carcasses of prey animals in the snow, without mentioning remaining motionless for hours in the freezing cold waiting for the ravens to appear. All of this has to do with an attitude towards field ethology that often goes beyond the merely observing animals in nature, but to actually perform behavioural experiments in the field. This is one of the most captivating aspects of this book: the curiosity drives the authors, and his students, to ask questions to those beautiful birds, through simple and provoking modifications of the ravens' environments (modifying number of eggs in the nest, hiding food under the snow, presenting unfamiliar objects, etc.). Heinrich also makes use of a large aviary near his house, where he keeps most of his experimental subjects. A large part of his observations, described in the book, comes from this open-air laboratory.

Through these pages, we learn the characters and motivations of different subjects, when they respond to the stimuli and challenges proposed by the researcher. The biology of the ravens, is described in details through 28

chapters. It seems a lot, the book runs for more than 500 pages, but it is surprising how the pages rarely cease to entertain, and I personally was never tired of hearing another adventure of “Pennabianca” and “Golia”. The individuals Heinrich knows best are named, and this is not a case: as a matter of fact, Heinrich offers undeniable observational proofs that the term “personality” and “individual” belongs not only to humans and their primate cousins, but to other seemingly distant animals, such as birds. This is a trend which is now well established in the ethological literature. Personalities traits similar to humans were first described for non-human primates, but now papers are published which describe personality profiles in invertebrates (such as spiders, for example). Therefore, it is really no surprise that individual ravens are described in this book nearly like humans, and the reader finds easy and satisfying to feel empathy for the adventures of these volatiles. However, anthropomorphism is not what this book is about. Bernd Heinrich is a well-respected and known researcher in behavior and ecology: he has studied and published work on insects, environment, general ethology and...running marathons! (Heinrich is a champion of long-distance running).

So, perhaps this book is less didactic than his previous effort on ravens' behavior, but nevertheless its rich hypothesis grounded in behavioural ecology, and predictions derived from the knowledge of birds behavior and evolutionary principles. I found particularly fascinating the description of the relationship between ravens and wolves. The final picture describes a sort of mutualism between the two species, which recall the mutualism existing between local populations of humans and honeyguide birds in Africa.

Mind of the raven (translated in Italian as “*La mente del corvo*”) is a very appropriate title. As a matter of fact, the book is a journey in the mind of these animals. We learn about their motivations, their feelings, and the relation between these and their behavior. It is also laudable the fact that the author, although enthusiastic about the cognitive capacities of these birds, never falls (as said before) in the trap of attributing human-like sentience or reasoning abilities, but he remains within the boundaries of acceptable scientific explanations even for the more impressive, cognitively speaking, ravens' behavioural manifestations.

And then, the final chapter of the book summarises very well the attitude and the underlying feeling which run through the previous pages. Love and passion for these creatures and scientific questions are strongly linked.

Who is the audience for this book? My instinctual answer would be “anybody really”. Students, researchers in ecology and evolution, bird-watchers, nature lovers (some of these categories happily overlap). I also think that the book is full of examples, as I have already said before, that could be used in ethology courses to explain

students the “hypothesis-predictions” methodological paradigm to approach the study of animal behavior.

Therefore, this book is entertaining, fascinating, easy to read and engaging (pictures and drawings in the text are very beautiful as well). At the end, it is very hard not to fall in love with these extraordinary birds.

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MALATERRA: COME HANNO AVVELENATO L'ITALIA

Marina Forti
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Giuseppe Laterza & Figli Spa;
2019.
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€ 13,00.

[“Malaterra”: *how they poisoned Italy*]

The eco-toxicological and epidemiological research line situation (mainly, abnormal levels of oncological patients, malformations at birth, etc.) represented a pivotal and emerging issue in the last two or three decades. Such a trend undoubtedly occurred at a global level, yet Europe, and particularly some Italian areas, suffered more because of their management difficulties.

The Italian scenario witnesses, in fact, an historical series of “special cases” which are described in the present book. Single chapters are dedicated to the following Italian geographical areas, selected on the basis of their mediatic and eco-toxicological interest: Seveso (summarily quoted) Brescia, the Sacco River area, the Taranto Gulf and its local heavy industries, Porto Marghera (Venice area, chemical pollution in marine coastal zones), Montichiari (a minor community south-east of Brescia), Portoscuso (Sardinia).

They mostly concern notorious ecotoxicological situations, as SICs (“ecologically hot” sites of special EU interest), which already attracted years of biomedical and public health attention.

A major problem concerned, and still concerns, the sometimes “irrational” reaction of the “ordinary people”, especially those spending their entire lives within the boundaries of recognized SICs: but, also, specific vulnerable populations living outside those recognised SIC zones, but somehow involved in such a potentially harmful effect. In particular, pregnant women, neonates, early-, middle- and/or late-adolescents, elderly people as well as patients affected by specific pathologies ren-

dering them highly fragile subjects in the case of even short- and/or mild-level exposure to toxicants, including subtle behavioural (e.g. infantile learning, school achievements, etc.) effects caused by neurotoxicants. For these national priorities our ISS (Istituto Superiore di Sanità, Italian National Institute of Health) devoted, since this year, a specific high-level inter-departmental structure named “Infantile health and environmental pollution” with its coordination attributed to the “Environment and health” (DAMS) ISS Department.

The author Marina Forti is a recognized journalist and writer. She is endowed by a double journalistic specialization. Firstly, she is a mature expert of foreign affairs and policies, with a particular interest in contemporary problems experienced by women. The countries she has been travelling and spending consistent periods of time had been and still are Iran, Southern and South-East Asia.

Secondly, her marked interest in “ecological problems” also aroused a long time ago. She was, for several years, columnist and media active in this field, also receiving the prestigious prize “Premiolino” in 1999 for her long effort as an ecology problems reporter. As a whole, her approach is undoubtedly the one of “a serious journalist”, including in the various chapters, among various other aspects, a variety of direct interviews with well-selected opinion leaders, soundly representatives of the Italian scientific community: therefore “translating” and condensing their ideas, point of views and methodological approaches. This is (in, of course, a summarized and made “digestible” version for the general readership) a rather fragile attempt, especially when reporting of hot and necessarily alarming issues such as not enough assessed risk or exposure level, the latter in turn often being the result of multiple concurrent toxicants, difficult to disentangle in terms of actual arm. In general, she does prefer a “principle of precaution” approach.

It is however noticeable that Forti in her final formal thanks at the end of her book mentions, among many others, scientific experts of the calibre of epidemiologist Pietro Comba (active for a few decades at ISS and also recipient of the honorary citizenship by Casale Monferato for his invaluable multi-annual involvement in assessing local mesothelioma spreading) and Gianni Tognoni, active at the Milan-based Istituto Mario Negri, a top institution which for a long time showed a regular complicity with Italian (a more recently European) media world.

Therefore, this book, in reality a kind of collection of Italian special cases, which unfortunately may also attract biased geographical readership, is recommended to policy makers as well as to sensitive yet experienced public health officials. It also contains a rather expanded apparatus of grey literature quotations in its final notes, also including a good sitographic list. It may deserve an English version.

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